

Ms Niamh Hickey
An Bord Pleanála
SID Applications
64 Marlborough St, Rotunda,
Dublin 1, D01 V902,
Ireland

22 January 2024

ABP-317498-23

Re: 10-year permission for the construction of a 220Kv Substation Compound and All Associated Works located within the Townlands of Woodtown, co. Meath. (www.culmullinsubstation.ie)

Dear Ms Hickey,

This letter sets out the Applicant's (Energia Solar Holdings Limited) response to submissions received from Meath County Council, and third parties, in relation to the planning application for a 220kV Substation Compound and All Associated Works in the Townlands of Woodtown, Co. Meath (ABP reference ABP-317498-23).

The applicant and project team have considered the matters raised and the following information provides a response to each of the submissions, as invited by An Bord Pleanála in their letter dated 14 December 2023.

STATUTORY BODY SUBMISSION

1. Meath County Council

An Bord Pleanála is advised that part of the application site is in the townland of Culmullin which is not referenced in the public notices.

Response:

AECOM's original notices (site and press) and the application form presented a site location of "[an associated address of lands at Woodtown, Electoral District of Rathmore, Co. Meath, Leinster, Ireland](#)".

For clarity it is highlighted that the vast majority of proposed built development, namely the substation, its associated compound and associated connection infrastructure are, indeed, within the townlands of Woodtown as referenced in the submitted documentation.

Within the townlands of Culmullin are the following components:

- New site access off the L62051 and internal site access road.
- 5 Passing Bays on the L62051.

With regards to the site access, and internal site access road, they are within the redline boundary of the Applicant's wider solar farm site 'Woodtown solar farm' approved by Meath County Council on 15/06/2022¹ and, following an appeal, subsequently approved by An Bord Pleanála on 14/12/2023 (314058)²

¹ <https://www.eplanning.ie/MeathCC/AppFileRefDetails/212214/0>

² <https://www.pleanala.ie/en-ie/case/314058>

It is noted that the “new site access” referenced in the Applicant’s substation application relates to the same entrance on the L62051 approved under the Woodtown solar farm. The internal site access road falls within the site boundary of the Applicant’s Woodtown solar farm and so, whilst within the townland of Culmullin, would not be within public lands.

The 5 passing bays on the L62051 are located on public land outside of previous approved boundaries as associated with the Woodtown solar farm, however, are minor in nature with regards to built infrastructure, hence the reference to Woodtown alone for development in the application documentation. We therefore remain content that the information provided in the application documentation and the public notices reflects the development hereby proposed.

An Bord Pleanála should be invited to consider the newly emerged archaeological finds within the field where the proposed application site is proposed, it is recommended that further information is requested from the applicant in relation to the find and it is advised that an archaeological assessment or strategy is further considered for this site. Such as study should lead to further work such as archaeological geophysical survey, archaeological trial trenching and if there is archaeology present, a strategy regarding archaeological preservation in situ or preservation by record (rescue excavation). On such large site, it is the developer’s interest to get an archaeological geophysical survey completed as part of the planning application and this is recommended. The applicant should also consider the townland boundary between Woodtown and Culmullin: as part of the site is located in the townland of Culmullin. It is advised that archaeology is considered within the context of the application site and the Woodtown Solar Farm proposal given their intrinsic links and potential impacts.

In the event of a grant of permission, An Bord Pleanála is requested to condition the proposed mitigation, ensuring that such work is carried out by a qualified archaeologist with appropriate licences in place, etc.

Response:

Meath County Council references an Enclosure ME043-062 which was only added to the Record for Monuments and Places on the 25th of July 2023 and is reputedly located within the same field as the proposed sub-station. Examination of National Monument Service’s Historic Environment Viewer produces no record for this heritage asset.

The archaeological assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 has considered the likelihood of impact to unrecorded archaeological remains within the footprint of the proposed development. It notes the probability of such impact and has recommended that pre-development archaeological evaluation is conducted within the site. This will indicate the presence (or absence) of significant unrecorded archaeological remains more accurately than a geophysical assessment which will only indicate the presence of potential archaeological remains. The archaeological testing will also target heritage features of note such as the boundary between the townlands of Woodtown and Culmullin.

The potential impact of the proposed development upon the settings of recorded heritage assets within a 2km study area and in a wider context (particularly those mentioned in the Meath County Development Plan 2021-2027) was also assessed within the archaeological assessment. This determined that the proposed development will not create an adverse impact to the settings of any heritage assets.

Cumulative assessment in context of the Woodtown Solar Farm has been considered in the Culmullin 220kv Substation Environmental Considerations Report, June 2023. The Culmullin development will not result in likely significant or cumulative impact from an archaeological and cultural heritage perspective, when considered in context of Woodtown Solar Farm. A programme of pre-development archaeological evaluation will be undertaken in order to confirm the presence or absence of previously unrecorded archaeological remains within the Site, therefore no significant cumulative effect on previously unrecorded archaeological remains is anticipated. Even where the listed project overlaps with the Proposed Development, no cumulative impact will occur as there are no direct impacts to recorded monuments that will give rise to a significant impact.

The September 2023 ‘Applicant’s’ letter in relation to the submission of the observations received in relation to the planning application included a response to observation raised by the Department of Housing, Local Government and Heritage where the National Monuments Service (NMS) noted the presence of a circular cropmark to the west of the access road associated with the Proposed Development. The NMS recommended a number of conditions that should be included in event of any grant of planning. The Applicant does not have any objection to the proposed conditions as outlined by the NMS in their response of 11 August 2023.

An Bord Pleanála is advised to consider these applications in tandem as they are intrinsically linked to each other. Pl. Ref 212214 identified the location of a future substation at its current proposed location.

Response:

An Bord Pleanála is advised to consider the Culmullin 220kv Substation with the now permitted Woodstown Solar Farm which adjoins / wraps around the application site. The Woodstown Solar Farm will require connection to grid to export energy.

Both Developments are in line with Meath County Council Development Plan (MCDP) 2021-2027 which will strengthen the grid connection, allow for greater capacity and underpin a transition to low carbon economy. It is also consistent with measures outlined in the Climate Action Plan 2023 and 2024.

The Culmullin 220kv Substation Environmental Considerations Report (ECR, June 2023) has assessed the likely cumulative environmental impacts associated with the Proposed Development (a 220kv AIS substation project, named Culmullin 220kv Substation) and the Woodstown Solar Farm. The potential environmental impacts arising from the Proposed Development also have been considered with regards to the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected.

In conclusion, there are no likely significant cumulative residual impacts associated with the Proposed Development and the Woodstown Solar Farm.

Architectural Conservation Officer seeking recommendation of design and finishes of the proposed structures. Applicant referred to use Rural Design Guide to support integration into the landscape and the use of dark green paint on all exposed works.

Response:

An Bord Pleanála is advised to consider that EirGrid have functional specifications for steel masts and girders. For information EirGrid specifications reference documents are presented in Appendix A of this response (Doc. Ref. EirGrid XDS-GFS-19-001-R0 and XDS-GFS-18-001-R0), this means that EirGrid will not accept green paints on the HV equipment structures, all the primary equipment is galvanised steel finish, and the transformers are either green or grey. The palisade fence is the only structure that is powder coated green.

The Culmullin 220kv Substation Environmental Considerations Report (ECR), June 2023 Landscape and Visual assessment (Section 14.7.3) describes the visual effect of the electricity Substation with lightning and telecommunications masts being the most visible element associated with the proposal. The proposed substation and access road is confined within the boundary of agricultural fields. The embedded landscape mitigation measures will maximise the retention of existing vegetation, where possible, particularly along the proposed access road to the substation.

Spoil from the construction stage will be utilised to create a landscape berm approximately 0.6m in height with a slope gradient of 1:3 which will be planted with a mix of native shrubs and woodland and a native hedgerow will also be planted along the northeastern boundary of the proposed substation (refer Drawings 60657534-ACM-DWG-CM-528 to 530 included within the application documentation) to increase screening from external areas.

A recognisable modification in the landscape character outside the field boundaries and beyond the immediate local roads in middle- and long-distance views, beyond 700m from or along the R125 to the south are unlikely to be noticed due the nature of the development, intervening vegetation and built structures.

The landscape change at middle or long distances (700m to 1.7km and beyond) will range from Very Low to Negligible. The significance is considered Not-Significant Neutral as the development site will integrate in the overall pattern of the surrounding landscape.

In conclusion, the findings of the landscape and visual assessment carried out in the Culmullin 220kv Substation Environmental Considerations Report (ECR), June 2023, support the conclusion that there is no advantage to use of dark green paint on all exposed works and structures.

Heritage Officer provided comments in relation to the proposed development in consideration of the cumulative effects of the development on the landscape including the Woodtown Solar Farm proposal and any impact on the Hill of Tara. Given the proposed removal of mature trees and woodland along the local road to provide lay bays, An Bord Pleanála are requested to consider compensatory measures in the form of the provision of native woodland or other objective within the Heritage/ Biodiversity Plans for Co. Meath, to be agreed with the Heritage Officer.

The applicant has not provided the Woodtown Solar Farm development proposal in its photomontages, and it is considered that An Bord Pleanála should consider the cumulative effects of similar or large-scale developments in the area; and the impact on the Hill or Tara as the site is located in the Tara Skryne Hills (Hills and Upland Area) Landscape Character Area, an area of exceptional value and high sensitivity.

Response:

As set out in the submitted Ecological Impact Assessment (EclA) Table 7;

- One tree at passing bay 3 may be removed for the Proposed Development. The other treelines will be retained and protected during construction.
- There is one hedgerow that is almost entirely composed of the invasive non-native species cherry laurel that will likely be removed for the Passing Bay Site.

There is no proposed removal of woodland as a result of the proposed development. As also set out in the submitted EclA (Table 7), replacement planting of any vegetation (potential single tree, and one hedgerow) lost will occur. This will include planting native species of the local area. No non-native species will be planted. If required, replacement planting of the tree to be felled will occur.

Landscape assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 provided the embedded landscape mitigation measures (Section 14.6) to maximise the retention of existing vegetation, where possible, particularly along the proposed access road to the substation. Spoil from the construction stage will be utilised to create a landscape berm approximately 0.6m in height with a slope gradient of 1:3 which will be planted with a mix of native shrubs and woodland and a native hedgerow will also be planted along the northeaster boundary of the proposed substation (refer Drawings 60657534-ACM-DWG-CM-528 to 530 included with the Culmullin 220kv Substation Environmental Considerations Report, June 2023) to increase screening from external areas.

The selection of planting will be in coordination with the need for clearance beneath overhead transmission lines. The retention of existing vegetation, where possible, as well as the addition of raised shrub and woodland planting will retain existing screening from the east and increase screening effects in views from the northeast of the site.

The landscape and visual assessment in the Culmullin 220kv Substation Environmental Considerations Report June 2023 in Section 14.6 concluded that there are no additional compensatory measures deemed necessary. Therefore there is no requirement for provision of native woodland or other stipulations within the Heritage/ Biodiversity Plans for Co. Meath, to be agreed with the Heritage Officer.

Landscape and Visual assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 has considered the potential for visual effects in Combination with Woodtown Solar Farm as per below (Section 14.8.1):

“Where two or more features are seen together at the same time from the same place, in the same (arc of) view where their visual effects are combined” (GLVIA 2013). The Woodtown solar farm consists of four individual Site Areas which extend across the wider landscape. The Proposed Development is centrally located within Site Area 2 of the solar farm layout/plan. The PV panels have a linear arrangement with an east - west alignment within the established field boundary hedgerows.

The majority of available cumulative visual effects will be localised and confined to locations in close proximity of the Proposed Development. There are no sensitive visual receptors located within the immediate area where highest visual cumulative effects will be experienced (with the exception of landowners and/or farmers tending livestock and these receptors for which the view is incidental or unimportant are tolerant of a high degree of change and are considered to have a Low Susceptibility to visual change). Cumulative visual effects from available views in the immediate area are considered Low. Their significance/quality is Slight/Adverse.

The contained nature of the Site within a larger field network, the undulating character of the study area and general hedgerow vegetation restrict the opportunity to experience cumulative effects to distance views from isolated locations along the L62051 Cul de Sac to the north. Where available, the in-combination views present both developments as integrated elements within a wider landscape context and will become quickly screened once the mitigation measures detailed in the Woodtown Solar Farm Landscape Plan (including further enclosure of field boundaries with new hedgerows and infill planting) are implemented and begin to mature.

Cumulative visual effects from available views from the north are considered Low. Their significance/quality is Slight/Adverse.

Changes to the wider landscape character resulting from cumulative effects in-combination are considered low-negligible where the topography and the screening effects of vegetation will limit or fully screen the development. The overall cumulative visual effects are considered Low. Their significance/quality is Slight/Adverse.

Notwithstanding the cumulative Landscape and Visual assessment (Culmullin 220kv Substation in combination with Woodtown Solar Farm) contained in the Culmullin 220kv Substation Environmental Considerations Report, June 2023, a photomontage of both the Woodtown Solar Farm and Substation from Hill of Tara is presented in Appendix B of this response below.

This view is taken from the Hill of Tara (Mount of Hostages) towards the Application Site. Receptors of the view will include the visitors to the Hill of Tara site. The view captures the gently undulating land and irregular shaped field patterns with hedgerows in various conditions. The photomontage supports the findings of the cumulative Landscape and Visual assessment (Culmullin 220kv Substation in combination with Woodtown Solar Farm) contained in the Culmullin 220kv Substation Environmental Considerations Report, that the Proposed Development and the Woodtown Solar Farm are not visible from the Hill of Tara and have no negative visual impacts either singularly or in combination.

The EIA Screening Report refers to a range of general and specific mitigation measures which will be contained in the ECR and NIS to avoid, minimise or compensate for any effects on the environment. It is noted that none are present in the NIS, in the event of a grant of permission, it is recommended that the applicant is conditioned to plant hedgerows and install berms at appropriate locations around the perimeter of the site to support visual integration of the proposed development.

An Bord Pleanála is advised that Section 5.1 of the Culmullin 220Kv Substation Natura Impact Statement (NIS) June 2023 list recommendations for the mitigation measures.

Section 5.1:

“Notwithstanding the above, during the construction phase of the Proposed Development, industry-standard good practice measures will be implemented to prevent pollution of terrestrial and aquatic habitats. This will include typical pollution prevention measures which ensure no pollutants, including fuels, oils or sediment, can enter the Arodstown watercourse.”

The landscape assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 provided the embedded landscape mitigation measures to maximise the retention of existing vegetation, where possible, and the creation of perimeter berms.

Discrepancies between the NIS, EIA Screening and ECR with regards details of nearby watercourses.

Response:

Culmullin 220kv Substation Environmental Considerations Report, June 2023 section 8.4.2.1- Surface Water Features details the water features closest to the site, and are as follows:

- *‘Arodstown’ (Boycetown Stream), which flows from south to north, approximately 150m to the west of the Site. This flows towards the Derrypatrick River, which is approximately 1km to the north of the Site. This is a tributary of the River Boyne, which it enters approximately 9.0km to the northwest of the Site.*
- *Moyleggan River, approximately 1.3km to the southeast, and the Knightsbrook/Clonmeath approximately 2.5km to the southwest of the Site, which are in the Boyne_SC060 and Tolka_SC_010 Sub-catchments, respectively.*

The alternatives considered by the applicant related to cost, capacity and feasibility and did no reference a range of environmental impacts.

Response:

In relation to alternatives, 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018' states (Section 4.2) that the information provided must include *'A description of the reasonable alternatives studied by the developer'* and *'an indication of the main reasons for the option chosen...'*.

Reasonable alternatives, as defined in the Government guidance ('Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018' refer to Section 4.12 and 4.13) *'may relate to matters such as project design, technology, location, size and scale'* however there is no requirement for each of these alternatives to be assessed in detail and the guidance states that a broad description of each main (and reasonable) alternative studied and the key environmental issues associated with each is sufficient.

The basis on which the proposed development was identified from several connection methods was based on the feasibility of connecting to the transmission system. The site was also selected primarily due to existing natural screening, accessibility from the road network, and the opportunity to reduce the additional infrastructure required to facilitate the connection of the associated solar farms to the national electricity grid due to the central location of Culmullin 220kv Station (Section 4 of the Culmullin 220kv Substation Environmental Considerations Report, June 2023). This represents consideration of the environmental impacts of the development on landscape and transportation.

Following the EIA Screening in this context at the project feasibility stage, the consideration of reasonable alternatives and design evolution has been undertaken with the aim of avoiding and/or reducing adverse environmental effects (following the mitigation hierarchy of avoid, reduce and, if possible, remedy), while maintaining operational efficiency and cost-effectiveness, and considering other relevant matters such as available land and planning policy.

The Meath County Council Development Plan (MCDP) 2021-2027 was a consideration in site selection where land use policy and zonings were also informed by environmental constraints.

Culmullin 220kv Substation development is in line with Meath County Council Development Plan (MCDP) 2021-2027 which will strengthen the grid connection, allow for greater capacity and underpin a transition to low carbon economy. It is also consistent with measures outlined in the Climate Action Plan 2023 and 2024.

An Bord Pleanála are requested to condition the specific mitigation identified in Table 7, enhancement measures at Section 5.0 of the EclA. It is advised that the complementary mitigation measures are implemented across both the Woodtown Solar Farm and the proposed substation site.

Response:

The specific mitigation identified in Table 7 and enhanced measures at Section 5.0 of the EclA are to be considered as conditions. Mitigation measures for the proposed substation site are complementary with the Woodtown Solar Farm where relevant. For example, there will be replacement planting of hedgerow and there will be a Construction and Environmental Management Plan (CEMP).

An Bord Pleanála is invited to consider the impact of hedgerow removal on local ecological corridors (protected under Article 10 of the Habitat Directive) which have county importance and provide several ecosystem services. In the event of a grant of permission, a planning condition for written agreement with Meath County Council is recommended which requires submission of the following:

- *Specific details of species which shall be native to the area;*
- *Planting locations*
- *Timescale for planting; and*
- *Programme for replacement in the event of failure.*

Response:

The impact of hedgerow removal has been considered and there will be replacement planting of hedgerow as set out in the landscape management plan for the site. The species details and planting locations are set out in the drawings 606057534-ALM-DWG-CM-528 to 530 in the Culmullin 220kv Substation Environmental Considerations Report, June 2023. The selection of planting will be in coordination with the need for clearance beneath overhead transmission lines. The retention of existing vegetation, where possible, as well as the addition of raised shrub and woodland planting will retain existing screening from the east and increase screening effects in views from the northeast of the site.

Recommend need for an Invasive Species Eradication and Management Strategy.

Response:

In the Culmullin 220kv Substation Natura Impact Statement (NIS) June 2023, no invasive non- native species were identified within the substation site. However, the non-scheduled, high impact invasive species Cherry Laurel is present along the road at the Passing Bay site.

An Bord Pleanála is advised to request the Invasive Species Eradication and Management Strategy as a pre-commencement condition/ site maintenance condition for construction of the passing bays.

It is considered that photomontages which illustrate the proposed development in combination with proposed Woodtown Solar Farm should be requested by An Bord Pleanála to determine the cumulative visual impact of the proposal, including the impact of the entire project on the Hill of Tara. The local area in the vicinity of the site is an attractive agrarian landscape with mature native trees lining hedges along the roadside and individual fields. The site of the proposed substation raises from north to south but is set in an area which appears to have contained views.

Response:

Notwithstanding the cumulative Landscape and Visual assessment (Culmullin 220kv Substation in combination with Woodtown Solar Farm) contained in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 the photomontage of both the Solar Farm and Substation from Hill of Tara is presented in Appendix B below.

This view is taken from the Hill of Tara (Mount of Hostages) towards the application Site. Receptors of the view will include the visitors to the Hill of Tara site. The view captures the gently undulating land and irregular shaped field patterns with hedgerows in various conditions. The photomontage supports the findings of the cumulative Landscape and Visual assessment (Culmullin 220kv Substation in combination with Woodtown Solar Farm) contained in the Culmullin 220kv Substation Environmental Considerations Report, that the Proposed Development and the Woodtown Solar Farm are not visible from the Hill of Tara and have no negative visual impacts either singularly or in combination.

The Transportation Department of Meath County Council had indicated no objection to the proposed development, subject to several conditions. The Road Opening Licence process is the appropriate mechanism for consideration of the detailed construction process. This is separate to the planning process.

An Bord Pleanála are also invited to consider the cumulative effects of the proposed Woodtown Solar Farm and the proposed substation on environmental receptors, in the event of a grant of permission, to mitigate the impacts of the proposed development, An Bord Pleanála is requested to condition mitigation proposals within the Environmental Considerations Report.

Response:

An Bord Pleanála is advised to note that the 'Applicant' shall comply with the transportation requirements of the planning authority within which the Proposed development is located.

An Bord Pleanála are invited to consider screening in the European Sites associated with River Tolka as there is a hydrological link adjacent to the application site. An Bord Pleanála are invited to consider this in their assessment. It is noted that along the access (local road and agriculture access) there are deep drainage / ditches with water

visible. The applicant's NIS does not include any mitigation measures. In its Assessment, An Bord Pleanála are invited to consider the two no. projects (proposed substation and Woodstown Solar Farm) in tandem, considering the assessment which were carried out. An Bord Pleanála is advised to consider proposing its own mitigation measures.

Response:

In the Culmullin 220kv Substation Natura Impact Statement (NIS) June 2023, South Dublin Bay and River Tolka Estuary SPA was considered and subsequently screened out of further assessment (Section 4). The potential Zone of Influence (ZoI) of the Proposed Development for each impact source, and any European sites (if any) within the potential ZoI are stated and set out in Table 1 of the Culmullin 220kv Substation Natura Impact Statement (NIS), June 2023.

There is a tenuous connection between the SPA and the Site given the Moyleggan River is 150 m from the Site, separated by agricultural grassland which would act as a natural buffer zone between the Site and the River. In the unlikely instance, and in the absence of mitigation, that pollutants should enter the river, then they must travel ca. 31 km downstream to the South Dublin Bay and River Tolka Estuary SPA. Any pollutants would have been subject to a great amount of dilution over this distance and would very likely be imperceptible at the designated site. There would therefore be no impact on the SCI species or habitats which support them.

The Environment (Flooding) Department of Meath County Council has no objections to the proposed development from flood risk perspective.

Response:

Noted.

No details regarding CCTV poles etc. were provided. In the event of a grant of permission, the applicant should be invited to submit details and propose material finishes for the agreement of the Planning Authority.

Response:

An Bord Pleanála is advised to request the CCTV assembly construction detail as a pre-commencement condition/ site maintenance condition.

Given the nature of the development, fire safety details may need to be considered as part of the proposed development and the applicant is advised to consult with the Fire Office of Meath County Council.

Response:

An Bord Pleanála is advised to request the fire safety details and consultation with MCC fire Office as a pre-commencement condition/ site maintenance condition.

MCC Transportation Department noted that required sightlines may not be available at the proposed entrance onto the L-62051-0. Applicant requested to address issue, which may require a revised red line application boundary. All accommodation works needed to facilitate access off the local road L-62051-0 to R-125 to be identified and included in redline.

Response:

The proposed option to access the site benefits from the already permitted access with the Woodstown Solar Farm.

An Bord Pleanála is advised that the L62051 is 6m wide providing sufficient room for passing for the first 50m of this road from its junction with the R125. As set out in the Outline Construction Environmental Management Plan (oCEMP) at Section 4.10.3, a Construction Traffic Management Plan (CTMP) will be developed to mitigate and manage the construction of the proposals.

Applicant should be requested to provide additional planting details for site, including:

- a. Specific details of species which shall be native to the area,*
- b. Planting locations,*
- c. Timescale for planting,*

d. Programme for replacement planting in the event of failure.

Applicant should submit proposal for native woodland encompassing 2ha or similar in Co. Meath. It shall outline specific location(s), detailed proposals, planting mix, timeframes etc. This will act as compensation for the proposed removal of mature trees, woodland and hedgerows required to facilitate this development."

Response:

The submitted Ecological Impact Assessment (EclA) Table 7 explains in respect of loss of trees and vegetation:

- One tree at passing bay 3 may be removed for the Proposed Development. The other treelines will be retained and protected during construction.
- There is one hedgerow that is almost entirely composed of the invasive non-native species cherry laurel that will likely be removed for the Passing Bay Site.

There is no proposed removal of woodland as a result of the proposed development. The section of cherry laurel hedging likely to be removed (based on an assumption of a hedge depth of circa 4m and length of circa 30m) is approximately 120m². It is also reminded that cherry laurel (*Prunus laurocerasus*), whilst regarded as a high-impact invasive species, it is a non-scheduled species and exists in many hedgerows and residential gardens across the country. As also set out in the submitted EclA (Table 7), replacement planting of any vegetation (potential single tree, and one hedgerow) lost will occur. This will include planting native species of the local area. No non-native species will be planted. If required, replacement planting of the tree to be felled will occur. Landscape assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 provided the embedded landscape mitigation measures (Section 14.6) to maximise the retention of existing vegetation, where possible, particularly along the proposed access road to the substation. Spoil from the construction stage will be utilised to create a landscape berm approximately 0.6m in height with a slope gradient of 1:3 which will be planted with a mix of native shrubs and woodland and a native hedgerow will also be planted along the northeastern boundary of the proposed substation (refer Drawings 60657534-ACM-DWG-CM-528 to 530 included with the Culmullin 220kv Substation Environmental Considerations Report, June 2023) to increase screening from external areas.

The selection of planting will be in coordination with the need for clearance beneath overhead transmission lines. The retention of existing vegetation, where possible, as well as the addition of raised shrub and woodland planting will retain existing screening from the east and increase screening effects in views from the northeast of the site.

The landscape and visual assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023, in Section 14.6, concluded that no additional compensatory measures are deemed necessary. In conclusion there is no requirement for provision of native woodland or other stipulations within the Heritage/Biodiversity Plans for Co. Meath, to be agreed with the Heritage Officer.

THIRD PARTY SUBMISSIONS

This section of the response deals specifically with matters raised in third-party submissions received in relation to the application. It does not seek to duplicate information presented earlier in the document, and where possible directs the reader to the relevant section(s) of this submission and/or information already lodged in relation to the application.

1. Transportation/Access

The submissions received from third parties in relation to transportation and access matters have been carefully considered. For ease, each matter arising has been attributed a number and a dedicated response below.

1. *A number of submissions outline concerns with the proposed Access Road, requesting alternative entry/exit locations due to negative impacts on the local residents as a result of traffic levels and noise.*

Response:

It is considered that the traffic generations associated with the proposed development will be low due to the nature of the proposed site. Furthermore, the peak traffic generated by the development will be during the construction period and negligible traffic when the site is in operation will be created.

There are no footways in the vicinity of the Proposed Development site access or along the R125. Within the extents of the study area no footpaths are located in the rural environs situated near the Site. To improve the traffic safety on the L62051, improvement works are proposed in the form of construction of five passing bays. The locations of these improvements will be spaced at appropriate intervals so as to reduce the distances between two-way sections and passing bays, and in order to allow opposing drivers to see each other in sufficient time to give way at one-way.

- 2. A number of submissions suggest that the entrance point will make navigation of the road difficult for local residents.*

Response:

There are no footways in the vicinity of the Proposed Development site access or along the R125. Within the extents of the study area no footpaths are located in the rural environs situated near the Site. To improve the traffic safety on the L62051, improvement works are proposed in the form of construction of five passing bays. The locations of these improvements will be spaced at appropriate intervals so as to reduce the distances between two-way sections and passing bays, and in order to allow opposing drivers to see each other in sufficient time to give way at one-way.

In line with the mitigation measures outlined in the Traffic and Transport Assessment (Appendix I of the Culmullin 220kv Substation Environmental Considerations Report, June 2023) and the oCEMP accompanying the planning application, a Construction Traffic Management Plan (CTMP) will be developed in consultation with Meath County Council (MCC), the Applicant and other stakeholders should consent be granted. As part of the CTMP, the Applicant will consult with TII, all relevant private and public companies and road authorities to ascertain operational requirements including Deed's of Indemnity (where required).

- 3. A number of submissions outlined concerns with the road surface and deterioration of the road as a result of the proposal.*

Response:

The Culmullin 220kv Substation Environmental Considerations Report (ECR), June 2023, outlines that a CTMP will be developed in respect of the site. Mitigation measures for the site include:

- Details of a proposed condition survey on access routes.
- Proposals for maintenance of the agreed routes for the duration of the construction phase.
- Proposals for monitoring and agreeing maintenance costs.

- 4. One submission detailed concern in respect of passing bay no.4 and its construction impact.*

Response:

The Population and Human Health assessment in the Culmullin 220 kV Substation Environmental Considerations Report, June 2023 (Section 5.5), presents that where potential temporary nuisance to the local population may occur during the construction works, particularly in terms of noise, air quality and traffic effects, given no sensitive receptor is located in proximity of the Proposed Development, the impact on air quality, noise and neighbourhood amenity as a determinant of human health is therefore assessed to be neutral.

No likely significant impacts are anticipated to human health during the operational phase.

2. Alternative access/consideration of alternatives

A number of submissions detailed disapproval of the alternatives considered, and information provided by the applicant.

Response:

The Community Consultation Report submitted with the application proposals sets out comprehensive engagement with the local community. In addition, the basis on which the proposed development was identified from several connection methods were based on the feasibility of connecting to the transmission system, the site was also selected primarily due to existing natural screening, accessibility from the road network and the opportunity to reduce the additional infrastructure required to facilitate the connection of the associated solar farms

to the national electricity grid due to the central location of Culmullin 220kv Station (Section 4 of the Culmullin 220kv Substation Environmental Considerations Report, June 2023).

This represents consideration of the environmental impacts of the development on landscape and transportation. Following the EIA Screening in this context at the project feasibility stage, the consideration of reasonable alternatives and design evolution has been undertaken with the aim of avoiding and/or reducing adverse environmental effects (following the mitigation hierarchy of avoid, reduce and, if possible, remedy), while maintaining operational efficiency and cost-effectiveness, and considering other relevant matters such as available land and planning policy.

The Meath County Council Development Plan (MCDP) 2021-2027 was a consideration in site selection where land use policy and zonings were also informed by environmental constraints.

Culmullin 220kv Substation development is in line with Meath County Council Development Plan (MCDP) 2021-2027 which will strengthen the grid connection, allow for greater capacity and underpin a transition to low carbon economy. It is also consistent with measures outlined in the Climate Action Plan 2023 and 2024.

In conclusion, comments made to the application by members of the public are noted, however, it remains clear that the 'Applicant' has undertaken significant and appropriate community consultation and engagement, as detailed at Section 3 of the Culmullin 220kv Substation Environmental Considerations Report, June 2023 report and Consultation Report located at Appendix C of the Culmullin 220kv Substation Environmental Considerations Report, June 2023).

3. Construction timeframes

A number of individuals detail concerns in relation to the 2-year construction timeframe and associated impacts.

Response:

The oCEMP submitted as part of the application documentation details that construction activities will comply with the procedures, standards, work practices and management responsibilities to address potential environmental effect which may arise from the construction of the proposed development.

The Population and Human Health assessment in the Culmullin 220 kV Substation Environmental Considerations Report, June 2023 (Section 5.5) presents that where potential temporary nuisance to the local population may occur during the construction works, particularly in terms of noise, air quality and traffic effects, given no sensitive receptor is located in proximity of the Proposed Development, the impact on air quality, noise and neighbourhood amenity as a determinant of human health is therefore assessed to be neutral.

No likely significant impacts are anticipated to human health during the operational phase.

Construction activities, and associated noise emissions, will gradually phase out from pre-construction followed by commissioning and testing of the Substation and equipment. During the construction of the substation the distances between the construction site and nearby sensitive receptors are relatively large (950m or greater, depending on the receptor). Therefore, it is expected to be relatively straightforward to achieve the limits acceptable for construction activities to not rise nuisance at nearby receptors.

In line with the mitigation measures outlined in the Traffic and Transport Assessment (Appendix I of the Culmullin 220kv Substation Environmental Considerations Report June 2023) and the oCEMP accompanying the planning application, a Construction Traffic Management Plan (CTMP) will be developed in consultation with Meath County Council (MCC), the Applicant and other stakeholders should consent be granted. As part of the CTMP, the Applicant will consult with TII, all relevant private and public companies and road authorities.

4. Charm of laneway/resident living

A number of individuals detail the potential impact of the proposed development on the charm, quietness and natural appearance of the cul de sac.

Response:

Under the examples of the sensitivities typically assigned to different land uses identified in the Population and Human Health assessment Table 5.1. of the Culmullin 220kv Substation Environmental Considerations Report, June 2023 the area of the cul de sac is described as low in terms of land use and accessibility. There are no receptors that would experience land use or severance effects in the vicinity of the Proposed Development during construction.

A potential temporary nuisance to the local population may occur during the construction works, particularly in terms of noise, air quality and traffic effects. However, given no sensitive receptor is located in proximity of the

Proposed Development, the impact on air quality, noise and neighbourhood amenity as a determinant of human health is therefore assessed to be neutral (0).

No likely significant impacts are anticipated during the operational phase of the Proposed Development.

5. Cultural Heritage

One individual raised concerns regarding potential impacts on the graveyard.

Response:

No significant vibration generating activities are expected during the construction or operational phases of the Proposed Development.

The proposed passing bay will be located c.23m to the southeast of the boundary wall of the graveyard (ME043-017001) with the gravestones set further to the north within the graveyard. The Culmullin 220kv Substation Environmental Considerations Report, June 2023 Cultural Heritage Section 13 determined that, given this distance, works associated with the passing bay will not physically impact the archaeological site or its component parts although it will extend into the southeastern extent of its Zone of Notification. This will require submission of notification of the proposed works to the National Monument Service at least two months in advance of works commencing. The assessment further concluded that the proposed works will not impact the setting of graveyard (ME043-017001) or its component parts.

Other considerations

A number of responses detailed potential impact of the proposed development on equine training and daily recreation at a family equine training centre.

Response:

The Population and Human Health assessment in the Culmullin 220 kV Substation Environmental Considerations Report, June 2023 (Section 5.5) presents that where potential temporary nuisance to the local population may occur during the construction works, particularly in terms of noise, air quality and traffic effects, given no sensitive receptor is located in proximity of the Proposed Development, the impact on air quality, noise and neighbourhood amenity as a determinant of human health is therefore assessed to be neutral.

No likely significant impacts are anticipated to human health during the operational phase.

The Air Quality assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 (Section 9.5) screened out of detailed assessment emissions during construction and assessed the impact of those emissions as not significant.

Due to the limited number of emissions sources and good standard of existing air quality, emissions to air associated with road traffic emissions during construction and operation, and NRMM and site plant emissions during operation of the assessment was considered to be not significant.

The Noise assessment in the Culmullin 220kv Substation Environmental Considerations Report, June 2023 (Section 11.5) considers noise and vibration from the Proposed Development during the construction and operational phases of the Proposed Development.

Construction activities, and associated noise emissions, will gradually phase out from pre-construction followed by commissioning and testing of the Substation and equipment. During the construction of the substation the distances between the construction site and nearby sensitive receptors are relatively large (950m or greater, depending on the receptor).

Once constructed, the Proposed Development will incorporate some sound generating elements with the operational resulting sound levels at all receptors to be below the night-time criterion for 'Areas of Low Background Noise' (35 dBA), no adverse impact is predicted with regards operational phase sound emissions.

No increase in road traffic is expected on the existing road network during operation of the Substation.

Conclusions

This submission and associated appendices have been prepared to address the submissions/observations made in relation to the proposed development at Woodtown, County Meath. The information provided here will directly assist the Board in their consideration of the planning application. The information constitutes a full and robust response to the matters raised. It is recognised that in their consideration of the Proposed Development the Planning Authority have noted the principle of the proposed development is considered acceptable.



Should you require anything further please do not hesitate to contact me.

Kind Regards

Yours Sincerely

Aldona Binchy

Associate Director EIA,
Environment and Sustainability, EUR - UK & Ireland

Appendix A

EIRGRID Specification Reference Documents

(Doc. Ref. EirGrid XDS-GFS-19-001-R0 and XDS-GFS-18-001-R0)



Document Reference: XDS-GFS-18-001-R0

Station Hot Dip Galvanising of Iron and Steel

Other Than Wire

Revision History				
Revision	Date	Description	Originator	Approver
R0	01/09/2011	First Issue – This document supersedes XDS-WTS-18-001-R0. Sections 4.5, 5 and 8.2 updated.	Paul Moran	Christy Kelleher

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1 SCOPE

This specification relates to hot-dip galvanised coatings on structural steel, structural and sheet steel fabrications, tube assemblies, bolts, nuts, screws and other small articles processed in bulk, steel castings, steel forgings, steel stampings, iron castings and similar products.

It does not apply to products such as wire, sheet steel or tubing which will later be made into finished articles.

2 STANDARDS

ISO 752	Zinc Ingots.
ISO 2178	Non-magnetic coatings on magnetic substrates – Measurement of coating thickness method.
ISO 1460	Metallic coatings – Hot-dip galvanised coatings on ferrous materials –Gravimetric measurement of the mass per unit area.

In the event of conflict between the listed standards and specification here within, this specification shall take precedence

3 SERVICE CONDITIONS

The equipment shall be installed outdoors in electrically exposed locations, less than 1,000 metres above sea-level.

The following air temperatures apply: -

Maximum ambient temperature	40°C
Maximum daily average ambient temperature	30°C
Annual average ambient temperature	20°C
Minimum ambient temperature	-25°C

The maximum wind (gust) velocity is 50 metres per second.

The humidity is high and the atmosphere is often salt-laden.

The humid salty atmosphere in Ireland is particularly severe on non-galvanised ferrous parts and on aluminium and its alloys.

4 GALVANISING REQUIREMENTS

4.1 HOT-DIP GALVANISING BATH

The zinc of the hot-dip galvanising bath shall contain not less than 98.5% by mass of zinc according to ISO 752. No zinc impurities or additives, which could have a deleterious effect on the durability of the zinc coating, shall be acceptable.

4.2 APPEARANCE OF FINISHED COATING

The galvanising coating shall be smooth, continuous, uniform and free from anything that is detrimental to the stated use of the coated article. It shall be free from acid spots, flux stains and shall not scale or blister, or be removable by normal handling or packing.

Shiny, dull grey or spangled surface appearance shall be generally acceptable.

Extensive wet storage stain (white rust) shall be unacceptable.

4.3 THICKNESS OF COATING

The thickness of the galvanising coating shall comply with the minimum average values given in Table A when tested in accordance with the requirements of this Specification.

4.4 UNIFORMITY OF COATING

The uniformity of the galvanising coating shall be such that the minimum individual thickness measurement on any test sample shall not be more than 7 microns (μM) below the minimum average figure specified in Table A for that article.

4.5 MASS OF COATING

The mass of the galvanising coating per square metre of the surface area shall comply with the minimum values given in Table A when tested in accordance with the requirements of this Specification.

Table A

Description of Articles	Minimum Mass Deposited (Grams/Metre ²)	**Minimum Average Coating Thickness in Microns (μM)
Steel Items 5mm thick and over	610	85
Steel Items between 2mm and 5mm thick	460	65
Steel Items under 2mm thick	335	47
Threaded Steel Items	305	43
All Components of Lattice Steel Towers except	610	85

Threaded Items		
Iron Castings	610	85
HV Insulator Metal Parts	750	106
HV Compression Fittings	750	106
18mm dia. stayrods (normal)	10005	130

**The minimum average thickness figures in Table A can be defined as the lowest of the individual average values for the number of samples under test (see Clause 8.2).

5 TESTING PROCEDURE

The tests detailed in this specification shall be carried out on the first consignment of each article supplied by the Galvaniser, if there are more than one galvaniser supplying articles then this clause shall apply each galvaniser there after.

In addition, EirGrid shall have the right to nominate further consignments for test at random. The results must be recorded on the standard test certificate and submitted by the Customer to EirGrid. Only after EirGrid approves the test certificates may the consignment of articles be delivered.

EirGrid representative shall have the right to witness the tests and to inspect the parts of the Galvaniser's works used during the work on the consignment. All costs in connection with the testing shall be borne by the Customer.

The Customer shall give EirGrid at least 20 working days advance notice of the date of testing.

The following tests shall be carried out on each of the selected samples: -

- Visual Inspection
- Thickness of Coating
- Uniformity of Coating

Testing shall be carried out in accordance with this Specification. The result of this test shall be definite and binding.

In addition to the procedures set out above, EirGrid may, at his own expense, select samples from consignments after delivery to his Stores and have them inspected and tested.

Should these samples not comply with the requirements, the whole consignment may be rejected.

6 SAMPLING

The number of samples to be selected for the tests shall be determined by the following formula: -

$S = 4 + (1.5N/1000)$ where S=Number of Samples

N=Quantity in Consignment

The value of S obtained is subject to an absolute minimum of 4 and an absolute maximum of 15.

EirGrid shall have the right to select the samples at random from the actual consignment on order.

7 VISUAL INSPECTION

The inspection shall include the following elements: -

- Smoothness: No exposed spots, spikes or anything detrimental to stated use of the articles or to personnel handling them.
- Stains: No acid spots or flux/dross stains.
- Adhesion: No blisters, peeling or flaking. Must be able to withstand normal handling without deterioration.
- Wet Storage Stain (White rust): Storage/stacking conditions should not encourage this. Excessive white rust will cause the consignment to be rejected.
- Threading: Free travel on threads by nuts (with oiled uncoated female threads). The threads of the nuts to be cut oversize to allow for the galvanising coating on the standard bolt threads.

8 MAGNETIC MEASUREMENT

8.1 INSTRUMENT

Thickness measurements shall be determined by a magnetic instrument method as set down in ISO Standard 2178.

The instrument used shall have the necessary degree of accuracy, range of probes and probe adaptors to enable reliable readings to be obtained consistently.

Before commencement of the measurements, the instrument shall be calibrated, preferably of an un-galvanised sample of the article under test. The steel surface used for the calibration should be cleaned by machine process or abrasive.

8.2 THICKNESS OF COATING

Between five and ten measurements shall be taken per sample, depending on size, shape, etc. The average thickness figure shall be the average of all the readings for that sample.

The minimum average coating thickness requirement given in Table A is defined as the lowest of the individual average thickness values for the number of samples under test.

The test area on articles, such as beams, long crossarms, etc., shall be located at the end, which is first removed from the zinc bath. If there is uncertainty regarding choice of ends, then two test areas shall be chosen per sample, one at each end.

In relation to stay rods, normal stay rods (as opposed to rock stay rods) shall have a minimum average thickness of galvanising of 130 microns, measured over the round section of the items at ten sites. Where a thickness of less than 110 microns is encountered, the galvanising thickness of the site may be re-evaluated by averaging five readings taken on a 150mm length of rod centred on this site. The average of these five readings shall not be less than 110 microns. The same requirements will apply to all other articles on drawing

A3D.205236 but with 130 microns and 110 microns replaced by 85 microns and 70 microns respectively.

8.3 UNIFORMITY OF COATING

The individual minimum value of the readings taken on each sample shall be necessary to determine the uniformity of the coating in accordance with the requirements of this specification

9 MASS OF COATING

This shall be determined by a coating stripping procedure as set down in ISO Standard 1460.

This test, when required, shall normally be carried out on two samples. The two samples chosen shall be the ones that have given the lowest readings when tested by the magnetic measurement method.

For shaped articles, details of the method of calculating the surface area shall be agreed between the Customer and EirGrid.

10 REJECTION

If any sample fails to meet the requirements of this Specification, twice the original number of samples shall then be tested. If any of these samples fails to conform, the whole consignment of articles represented by samples shall be rejected.

A consignment that has been rejected may be re-galvanised and again offered for test, provided that it is according to specification in all other respects.



Document Reference: XDS-GFS-19-001-R0

Functional Specification

Steel Masts & Girders

Revision History				
Revision	Date	Description	Originator	Approver
R0	01/09/2011	First Issue – This document supersedes XDS-WTS-19-001-R0. Sections 2, 6, 7, 8 and 17.1 updated.	Paul Moran	Christy Kelleher

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1 SCOPE

This Specification covers the design & testing of steel masts, girders and lightning masts for 110kV/220kV/400kV switching stations.

2 APPLICABLE CODES AND STANDARDS

The following standards must be complied with, as explained in subsequent sections of this specification.

ISO 630	Structural Steel
ISO 657-5	Hot-rolled steel sections - Part 5: Equal-leg angles and unequal-leg angles - Tolerances for metric and inch series
ISO 898	Mechanical properties of fasteners
ISO 4624,	Paints and Varnishes. Pull off test for adhesion
ISO 9001	Quality systems -- Model for quality assurance in design, development, production, installation and servicing
ASCE Standard 10-97	Design of Latticed Steel Transmission Structures
ASCE 1996, Part 5	Specification for the Design of Cold Formed Structural Members
BS 3643 -2	ISO metric screw threads. Specification for selected limits of size
BS 4190	ISO metric black hexagon bolts, screws and nuts - specification
EN 10025	Parts 1 & 2, Hot rolled products of structural steel
EN 10056	Parts 1 & 2, Specification for structural steel equal and unequal angles: Dimensions and Tolerances
EN 10149	Parts 1 & 2, Specification for structural steel equal and unequal angles
EN 10163	Parts 1, 2 & 3- Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections
ISO 657	Dimensions of Hot-Rolled Steel Sections
IEC 60652	Loading tests on overhead line structures
XDS-WTS-18-001	EirGrid SpecHot Dip Galvanising of Iron and Steel Other Than Wire

3 QUALITY OF MATERIAL

All relevant material shall be of the highest quality normally used on similar work and shall comply with ISO 630 and ISO 657-5 or other equivalent standards.

At the discretion of the Supplier, some or all of the mast and girder members may be of high tensile steel, but all bolts shall be of high tensile steel. High tensile steel having a specified minimum yield stress greater than 390/mm² shall not be used except by special agreement.

4 DESIGN LOADS

The external applied loads for which the masts and girders shall be designed are shown on the appropriate attached drawings. These loads are ultimate loads, and are the loads with which the structures shall be tested.

Design stresses in members shall be generally in line with the requirements of Standard 10-97 of the American Society of Civil Engineers, "Design of Latticed Steel Transmission Structures" and the general design shall be in accordance with this guide.

5 OUTLINES AND DIMENSIONS OF MASTS AND GIRDERS

The drawings mentioned in the covering letter show the general equipment arrangement and the critical dimensions of the steelwork and the heights over ground. When deciding on the mast or girder outline, designers shall adhere strictly to the dimensions shown on the drawings, and to any other requirements set out in this specification. With these limitations, designers are free to select the outline and arrangement which they consider most economical overall.

6 TYPE TESTS ON MASTS AND GIRDERS

The Customer shall submit the following:

- Full details of the testing facility
- Details of type tests that were carried out on similar structures.

EirGrid may select one or more masts and/or girder which shall be tested for each of the specified loading conditions, except for a condition where the calculations show that every member is more highly stressed under other conditions for which tests are carried out.

All components of the test masts or girders shall be galvanised in accordance with, EirGrid Specification, XDS-WTS-18-001, Hot Dip Galvanising of Iron and Steel Other Than Wire, unless by specific agreement.

Test procedure shall be in accordance with IEC 60652 but the specified loads in each test shall be sustained for 5 minutes.

A full report on all tests, whether witnessed by EirGrid or not, shall be submitted.

No additional payment will be made for any repeat tests which may be necessary if a failure occurs below the specified loads.

7 FABRICATION

Fabrication shall be carried out exactly in accordance with the approved drawings in a neat workmanlike manner so as to facilitate cleaning, painting and inspection, and to avoid spaces in which water can lodge.

Holes shall be true to form, free from rags and distortion and all burrs and sharp edges shall be removed.

No heating or cold working shall be permitted which would cause embrittlement of the steel and high tensile members may not be bent cold through more than 5°.

Where severe bending of members is unavoidable, flanges of angle sections may be cut and welded. Otherwise welding of members or gusset plates shall not be permitted unless by special agreement. All bolt end and edge distances shall meet the minimum distances required by ASCE 10-97 even after above crops have been made.

The backs of the inner angle irons of lap joints shall be chamfered, the ends of the members cut where necessary and such other measures taken as will ensure that all members can be readily bolted together snugly without strain or distortion.

When assembling the components, force may be used to bring the bolt holes together, (provided neither members nor holes are thereby distorted) but all force must be removed before the bolt is inserted; Otherwise strain shall be deemed to be present and the structure may be rejected, even though it is otherwise apparently in conformity with the approved drawing and the Specification.

It should be normally possible to insert bolts from either direction but where this is not possible it shall be clearly indicated. Bolts shall be so located relative to adjacent members that they can be conveniently tightened.

Individual mast or girder members shall not exceed 8.0m in length except by special agreement in each specific case.

8 FINISH

All steelwork, including nuts, bolts washers, lightning rods and foundation bolts, shall be hot dip galvanised. The minimum standard of galvanising shall be as set out in the EirGrid Specification XDS-WTS-18-001, Hot Dip Galvanising of Iron and Steel Other Than Wire.

The threads of nuts need not be galvanised.

Unless otherwise agreed, the galvanised members shall be treated with Sodium Bichromate or other approved solution to prevent white rust formation during transport and storage.

9 BOLTS, NUTS, WASHERS AND ACCESSORIES

Bolt threads shall be such that after galvanising the nut can be easily screwed over the whole threaded length without excessive play. The threaded length shall be such that the nut can be fully tightened up but also that the minimum practical amount of thread lies within the sections being jointed. There shall be a minimum projection of three (3) full threads beyond the nut when it is fully tightened on the bolt.

All bolts shall be supplied with flat washers and nuts and shall be dimensioned accordingly.

If more than one diameter of bolt is used the variation in diameter between different sizes shall be at least 4mm.

The dimension across flats of the heads of bolts and of nuts shall be different for each bolt diameter used.

The following accessories shall be included in the supply:

On girders, plates with drilling to suit application of the design load.

Anchor bolts for masts. These shall be subject to the same specification as all other fixings. The dimensions and number of bolts shall be determined by the Customer.

10 LIGHTNING RODS AND EARTHING

Lightning rods shall be fitted to all Masts. The lightning protections shall sufficiently cover the entire station equipment as per the requirements of DIN VDE 0101

Two 13.5mm dia. holes for an earthing connector shall be provided on every mast leg. This hole shall be located about 300mm above base. Its precise position shall be agreed with the mast fabricator.

11 TESTING OF MATERIAL AND FINISH

All the steel used shall be tested in accordance with the approved Specification and one copy of signed test reports shall be submitted for EirGrid review.

Should the quantities be so small in any particular case as not to warrant a special consignment from the rolling mills or in order to avoid delay, EirGrid may waive the above clause. In this case, however, the Customer must satisfy himself and confirm to EirGrid that the material has been tested and that it fully complies with the Specification.

EirGrid may take samples from consignments on delivery and have them prepared and tested. Should these samples not comply with the Specification the whole consignment may be rejected.

Galvanised parts, including the threads of bolts, shall be tested in accordance with EirGrid Specification and certificates shall be submitted to EirGrid immediately on completion of the tests.

12 INSPECTION AND TRIAL ASSEMBLY

EirGrid or a representative shall have access at reasonable times to all portions of the works in which parts of the masts and girders are being fabricated, galvanised or assembled for dispatch. They shall be shown on request records of routine tests carried out to check the quality of material, fabrication and finish, and shall be afforded reasonable facilities for taking samples and having these tested if they so desire.

A trial assembly of selected masts and girders type shall be made before any materials are dispatched to EirGrid.

Masts and girders assembled for type tests may be regarded as partially or fully satisfying this requirement.

EirGrid shall be notified at least ten days in advance of the date on which the trial assembly of each mast and girder type will take place. A representative shall be given facilities to examine the material at each stage of assembly, and to take any measurements considered necessary.

13 FOUNDATIONS

The masts will be fixed to concrete foundations designed and installed by the Customer using "J-bolts" The design, fabrication and supply of these bolts shall be the responsibility of the Customer

The bolts will be set in the foundations using templates supplied with the masts, template design to be agreed with EirGrid before manufacturer. The number of templates required will be indicated in the enquiry.

To facilitate the installation of foundations on site in advance of the delivery of the masts and if specified in the enquiry letter, templates and anchor bolts shall be provided to allow the placing of the anchor bolts and shall be the first items to be supplied.

14 MARKING AND PACKING

For lattice steel structures which are to be bolted together on site, each member shall be stamped before galvanising close to one end with the identification number shown on the approved drawing. Such identification numbers shall be at least 12mm high and deep enough to be clearly legible after galvanising. Other types of structures shall be marked as shown on drawings or in covering letter.

15 WARRANTY

The equipment shall be fully guaranteed for a two year period post handover of the Station to EirGrid.

However, the warranty period shall be extended to five years to cover all defects attributable to inadequate corrosion protection.

Should any defect occur during the above period, the Customer shall deliver all components necessary to correct the fault, together with any necessary instructions and specialist assistance, free of charge.

16 COMPLIANCE WITH SPECIFICATION

All deviations from the requirements of this Specification shall be listed in the schedule of deviations attached and the accompanying enquiry letter shall be listed separately and attached to the offer.

Should EirGrid determine that the proposal offer does not comply with this specification or any part of it, EirGrid shall reserve the right to reject the proposal

17 DOCUMENTATION

17.1 INFORMATION TO BE INCLUDED IN THE INITIAL SUBMISSION

- 1 Drawings and technical information for acceptance
- 2 The leading dimensions of each mast or girder.
- 3 Details of the foundation bolts required for each mast.
- 4 The height of each bay and such other dimensions as may be required to determine the buckling length of compression members.
- 5 Assembly drawings
- 6 Details as to which members, if any, are of high tensile steel.
- 7 Details of each joint and the length and diameter of the bolts.
- 8 General details of all bends, shaping and cuts.
- 9 An identification number, preceded by mast or girder type identification, for each member or plate.
- 10 A schedule showing the quantity, length and section of each member.
- 11 A schedule showing the quantity, length and diameter for bolts, washers and packs.
- 12 The position of the ground line.
- 13 Calculations showing the load, actual stress and permissible stress in each member and the actual and permissible load in each joint.
- 14 Fully dimensioned drawing of each setting template.
- 15 A clear indication of how every member and plate is to be fitted with respect to the adjacent members, the length of every bolt, the thickness of every pack washer, and any other information required for the rapid and accurate assembly of the structures on site.
- 16 A table showing the quantity, length, section and weight of each piece, including bolts, packs, etc. for each mast or girder.
- 17 The formula used to determine the permissible stress in compression members or a graph giving this information.
- 18 Details of corrosion protection

- 19 Service experience to date including defects history.
- 20 Details of Quality Assurance system and a short description of the Quality Control philosophy of the Tenderer and, if different, the manufacturer including sampling techniques, statistical parameters etc. plus tests carried out on raw materials employed.

The acceptance by EirGrid of drawings and/or calculation does not in any way relieve the Customer of responsibility for the design, or for the correctness of drawings and calculations.

17.2 OTHER DOCUMENTATION

The Customer Shall Also Provide With The First Calculation Submitted, The Following Information: -

- 1 The minimum distance of the centre of bolt holes from
 - 1.1 The end of the member
 - 1.2 Cut edges
 - 1.3 Uncut edges
 - 1.4 An adjacent bolt hole
 - 1.5 From the inside of an adjacent flange.
- 2 The clearance in bolt holes, that is, the difference between the diameter of the hole and that of the bolt.
- 3 The tolerance to be permitted in the position of bolt holes as regards:
 - 3.1 Their distance apart and
 - 3.2 Their distance from the datum line
- 4 Max and min permissible length of bolt projections beyond the nut.
- 5 The maximum permissible length of threaded portion of shank within a loaded member.
- 6 The tolerance for straightness of members.

The Customer shall also supply details of any dimensions (not shown on the drawings) which may be requested by EirGrid.

The above list is not exhaustive and does not preclude the Customer from disclosing any further information pertaining to the steel girders & Masts

Appendix B

Photomontage

EXISTING VIEW



Viewpoint Location & Capture Information
Location (ITM): 691936.93, 759741.64
Camera Level (Metres Above Ordnance Datum): 156.2
Date & Time: 09/01/2024, 11:45 AM

Camera Information
Camera: Canon 5D Mark IV
Lens: Canon EF 50mm f/1.4 USM
Focal Length: 50mm

Visuals prepared by
innovision 
Sligo Airport Business Park
Strandhill
Sligo
www.innovision.ie
+353(0)71 - 912 8220

Redline View

Redline depicts location of proposed development behind vegetative and/or landform screening



Viewpoint Location & Capture Information
Location (ITM): 691936.93, 759741.64
Camera Level (Metres Above Ordnance Datum): 156.2
Date & Time: 09/01/2024, 11:45 AM

Camera Information
Camera: Canon 5D Mark IV
Lens: Canon EF 50mm f/1.4 USM
Focal Length: 50mm

Visuals prepared by
innovision 
Sligo Airport Business Park
Strandhill
Sligo
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+353(0)71 - 912 8220

CUMULATIVE VIEW

Redline depicts location of proposed development behind vegetative and/or landform screening

Extent of Permitted Woodtown Solar Farm



Viewpoint Location & Capture Information
Location (ITM): 691936.93, 759741.64
Camera Level (Metres Above Ordnance Datum): 156.2
Date & Time: 09/01/2024, 11:45 AM

Camera Information
Camera: Canon 5D Mark IV
Lens: Canon EF 50mm f/1.4 USM
Focal Length: 50mm

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